Futalognkosaurus

Futalognkosaurus (/ˌfuːtəˌlɒŋkoʊˈsɔːrəs/ *FOO-tə-long-ko-SAW-rəs*;[1] meaning "giant chief lizard") is a genus of titanosaurian dinosaur. The herbivorous[2] *Futalognkosaurus* lived approximately 87 million years ago in the Portezuelo Formation, in what is now Argentina, of the Coniacian stage of the late Cretaceous Period. The fish and fossilized leaf debris on the site, together with other dinosaur remains, suggest a warm tropical climate in Patagonia during this period.

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Discovery

Fossils of *Futalognkosaurus* were found in the Neuquén province of Argentina in 2000, and were scientifically described in 2007. The genus name is derived from the local indigenous language Mapudungun and is pronounced foo-ta-logn-koh-sohr-us: "futa" means "giant" and "lognko" means "chief".[3] It is based on three fossil specimens, yielding an estimated 70% of the skeleton in total. The fossil team described the find as "the most complete giant dinosaur known so far".

Description

Restoration

The holotype of the type species, *Futalognkosaurus dukei*, was originally estimated at 32 to 34 metres (105 to 112 ft) in length.[3] In 2008 this was down-sized to 26 metres (85 ft).[4] In 2012 Holtz estimated it at 28 metres (92 ft) long and with an approximate weight of 43.5 to 51 tonnes (48-56 short tons).[5][6] An estimate by Gregory S. Paul in 2016 was that *Futalognkosaurus* had a maximum length of 30 metres (98 ft) and a weight of 50+ tonnes (55 short tons) .[7] In 2016, using equations that estimate body mass based on the circumference of the humerus and femur of quadrupedal animals, it was given an estimated weight of 38.1 tonnes (42 short tons).[8] In 2019, Paul estimated the weight of the holotype specimen, (MUCPv-323) at 29 tonnes (32 short tons),[9] and later, in 2020, Molina-Pérez and Larramendi estimated its length at 24 metres (79 ft), and its weight at 30 tonnes (33 short tons).[10] Its long neck contained 14 vertebrae, and was over a meter deep in places (http://svpow.files.wordpress.com/2009/10/cervical.jpg) due to its extremely tall neural spines which had a distinctive "shark-fin" shape (http://svpow.files.wordpress.com/2008/01/futalognkosaurus-illo.jpg). The hips were also extremely large and bulky, reaching a width of nearly 3 metres (9.8 ft).[11]

Futalognkosaurus

Temporal range: Late Cretaceous, 87 Ma

Pre€ € O S D C P T J K PgN

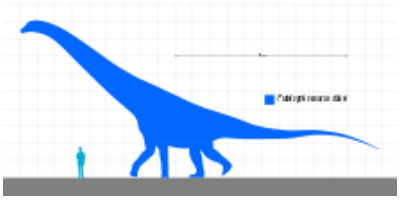
Mounted replica skeleton, Royal Ontario Museum

Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
Clade:	Dinosauria
Clade:	Saurischia
Suborder:	†Sauropodomorpha
Clade:	†Sauropoda
Clade:	†Titanosauria
Clade:	†Lithostrotia
Clade:	†Lognkosauria
Genus:	†*Futalognkosaurus* Calvo *et al.*, 2007

Type species

†***Futalognkosaurus dukei***
Calvo *et al.*, 2007



Size comparison

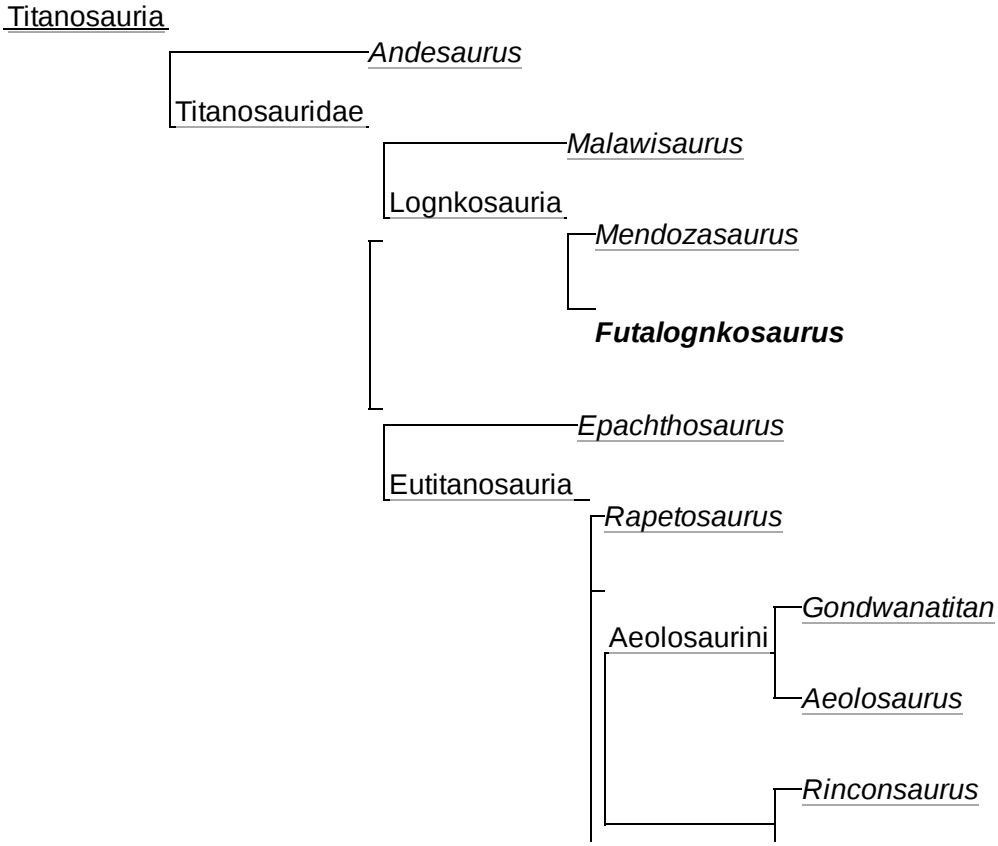
Classification

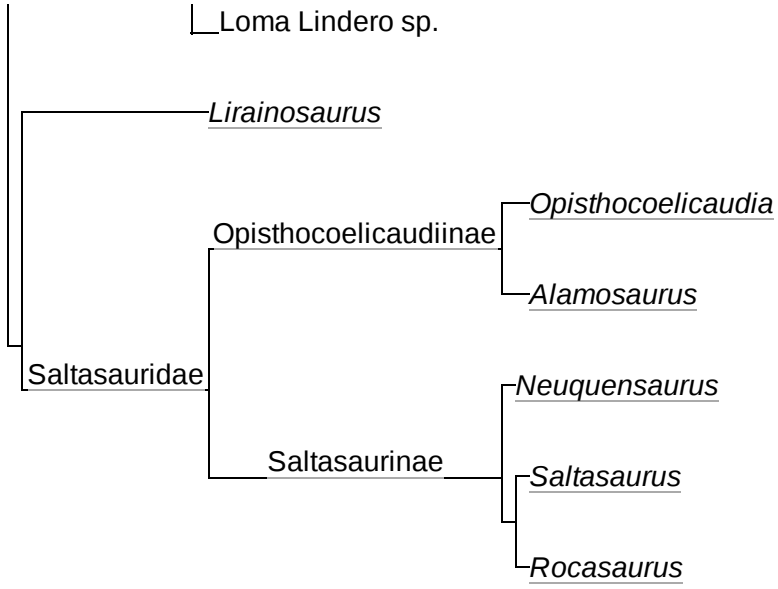
In their phylogenetic analysis, Calvo and colleagues found *Futalognkosaurus* to be a member of the Titanosauridae (or Lithostrotia, depending on the definitions being used), and most closely related to *Mendozasaurus*. They defined a new clade for the group containing both *Futalognkosaurus* and *Mendozasaurus*, their common ancestor, and all descendants, which they named the Lognkosauria.[3] The authors found *Malawisaurus* to be the sister group of this new clade. Another, much later member of Lognkosauria is the colossal *Puertasaurus*,[12] which may be the biggest dinosaur so far known. Besides *Futalognkosaurus*, other fauna was discovered in the Futalognko site, including two further undescribed sauropod taxa, specimens of *Megaraptor*, *Unenlagia* and some pleurodiran turtles.

The following cladogram shows the results of an analysis by Calvo *et al.* in 2007, where they placed *Futalognkosaurus* within the group Titanosauria, more precisely the clade Lognkosauria:[3]

Vertebrae

Restoration





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External links

- Dinosaur Mailing List entry which discusses the genus (http://dml.cmnh.org/2004Aug/msg00291.html)
- Fósiles hallados en el Centro Paleontológico Lago Barreales (http://www.proyectodino.com.ar) - contains images of *Futalognkosaurus* (in Spanish)
- BBC Report (http://news.bbc.co.uk/2/hi/science/nature/7046223.stm) of Monday, 15 October 2007 - includes a photo of some of the dinosaur's bones, attributed to National Museum of Brazil.
- Illustration of *Futalognkosaurus* by paleoartist Julius T. Csotonyi (http://www.csotonyi.com/Futalognkosaurus_dukei.html)

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